CLAIMS

1. A twist lock assembly for connecting a pair of fluid conducting conduits, comprising:

a first conduit having an open end with an annular first flange extending radially outwardly therefrom, said first flange having an alignment slot and at least one locking slot formed therein;

a second conduit having an open end with an annular second flange extending radially outwardly therefrom, said second flange having a radially inwardly extending alignment tab formed thereon; and

a locking ring rotatably mounted on said second flange and having at least one radially inwardly extending locking tab formed thereon,

whereby when said first and second flanges are positioned in an abutting and concentric relationship, said alignment tab engages said alignment slot and said at least one locking tab is aligned with said at least one locking slot, rotation of said locking ring relative to said second flange draws said first and second flanges into airtight engagement and locks said conduits together for fluid flow therethrough.

2. The twist lock assembly according to claim 1 wherein said second conduit is flexible.

3. The twist lock assembly according to claim 1 wherein said first conduit has an opposite end adapted to be attached to one of an air cleaner, a resonator, and a throttle body.

4. The twist lock assembly according to claim 1 including a sealing surface formed on each of said first and second flanges, said sealing surfaces mating when said first and second flanges are locked together.

5. The twist lock assembly according to claim 4 wherein a sealing bead is formed on a one of said sealing surfaces.

6. The twist lock assembly according to claim 5 wherein said sealing bead has a generally semicircular cross section.

7. The twist lock assembly according to claim 1 wherein said at least one locking slot has a ramped surface.

8. The twist lock assembly according to claim 1 wherein said first flange has two additional locking slots formed therein, said locking slots being equally spaced about said first flange, and said locking ring has two additional radially inwardly extending locking tabs formed thereon, said locking tabs being equally spaced about said locking ring for engagement with corresponding ones of said locking slots.

9. The twist lock assembly according to claim 1 including a stop member extending outwardly from said first flange for engagement with said at least one locking tab.

10. The twist lock assembly according to claim 1 including a cam locking member extending outwardly from said first flange for engagement with said at least one locking tab.

11. The twist lock assembly according to claim 1 wherein said locking ring releasably locks said conduits together for fluid flow therethrough.

12. A twist lock assembly for connecting an air supplying conduit to an air receiving engine component in a vehicle, comprising:

an air receiving engine component having a first conduit with an air inlet opening;

a first annular flange attached to said air receiving conduit and surrounding said opening, said first flange having an alignment slot and at least one locking slot formed therein;

a second conduit having an open end;

a second annular flange attached to said open end of said second conduit and having a radially inwardly extending alignment tab formed thereon; and

a locking ring rotatably mounted on said second flange and having at least one radially inwardly extending locking tab formed thereon,

whereby when said first and second flanges are abutting and concentric and said alignment tab engages said alignment slot and said at least one locking tab is aligned with said at least one locking slot, rotation of said locking ring relative to said second flange draws said first and second flanges into airtight engagement and locks said open end of said second conduit to said inlet opening of said first conduit of said engine component.

13. The twist lock assembly according to claim 12 wherein said second conduit is flexible.

14. The twist lock assembly according to claim 12 wherein said engine component is a one of an air cleaner, a resonator, and a throttle body.

15. The twist lock assembly according to claim 12 including a generally planar sealing surface formed on each of said first and second flanges, said sealing surfaces adapted to seal against one another.

16. The twist lock assembly according to claim 15 wherein a sealing bead having a generally semicircular cross section is formed on a one of said sealing surfaces.

17. The twist lock assembly according to claim 12 wherein said locking ring releasably locks said open end of said second conduit to said inlet opening of said first conduit of said engine component.

18. The twist lock assembly according to claim 12 including a cam lock member extending outwardly from said first flange for engagement with said at least one locking tab, said cam lock member having a ramped surface angled radially outwardly from a leading edge to a trailing edge thereof.

19. The twist lock assembly according to claim 12 including a cam lock member extending outwardly from said first flange for engagement with said at least one locking tab, said cam lock member having a ramped surface angled radially outwardly from leading and trailing edges thereof.

20. A twist lock assembly for connecting an air supplying conduit to an air receiving conduit, comprising:

an air receiving conduit with an air inlet opening and an annular radially outwardly extending first flange at said inlet opening, said first flange having an alignment slot and a plurality of locking slots formed therein and a first sealing surface formed thereon;

a second conduit having an open end and an annular radially outwardly extending second flange at said open end, said second flange having a radially inwardly extending alignment tab and a second sealing surface formed thereon; and

a locking ring rotatably mounted on said second flange and having a plurality of locking tabs formed thereon,

whereby when said alignment tab is engaged with said alignment slot and each of said locking tabs is engaged with a corresponding one of said locking slots by rotation of said locking ring in an engaging direction, said first and second sealing surfaces are held in airtight engagement.